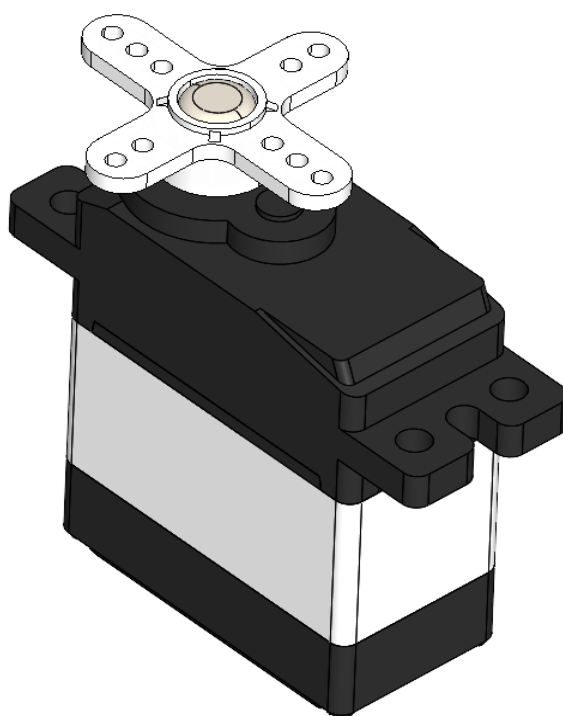


AD12-06H-A02 Technical Specification



AD12-06H-A02

Supports PWM signals and S.BUS2.

AD12-06H-A02 Technical Specification

Basic specifications (AD12-06H-A02)

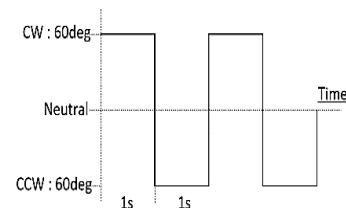
	Item		Specification		Remark
1	Rated Voltage		6.0 ~ 7.4	V	DC power supply.
2	Operating Voltage		4.0 ~ 8.4	V	DC power supply.
3	Standby Current		≤ 45	mA	at 6.0~7.4V
4	Starting Current * ¹		≤ 1.2	A	at 6.0~7.4V
5	Consumption Current * ^{1,*2}		90	mA	at 7.4V , No-Load
6	Max. Torque * ^{1,*2}		3.0	kgf·cm	at 7.4V
			0.29	N·m	
			42	ozf·in	
7	Rated Torque * ^{1,*2}		0.6	kgf·cm	at 7.4V
			0.06	N·m	
			8.3	ozf·in	
8	Rotation Time * ^{1,*2}		0.11	s/60°	This unit is commonly used as the speed unit for RC servos. at 7.4V
9	No Load Speed * ^{1,*2}		545	°/s	at 7.4V
			91	min ⁻¹	
10	Default Travel Angle *		CW 60° (920us) CCW 60° (2120us)		
11	Max Travel Angle		CW 90° (920us) CCW 90° (2120us)		Programing tool (CIU-2 or CIU-3,S-Link) required.
12	BackLash *		≤ 1.5°		
13	Temperature Range	Operating	-10~+45°C (14~113°F)		
		Storage	-20~+60°C (-4~140°F)		
14	Soft Start		OFF		Restricts operation in the specified direction the instant the power is turned on. By making this setting, only the fi rst operation when the power is turned on slowly moves the servo to the specifi ed position.

*¹ At 23±5°C (Initial Performance Data)

*² Each value is typical.

AD12-06H-A02 Technical Specification

Mechanical specifications (AD12-06H-A02)

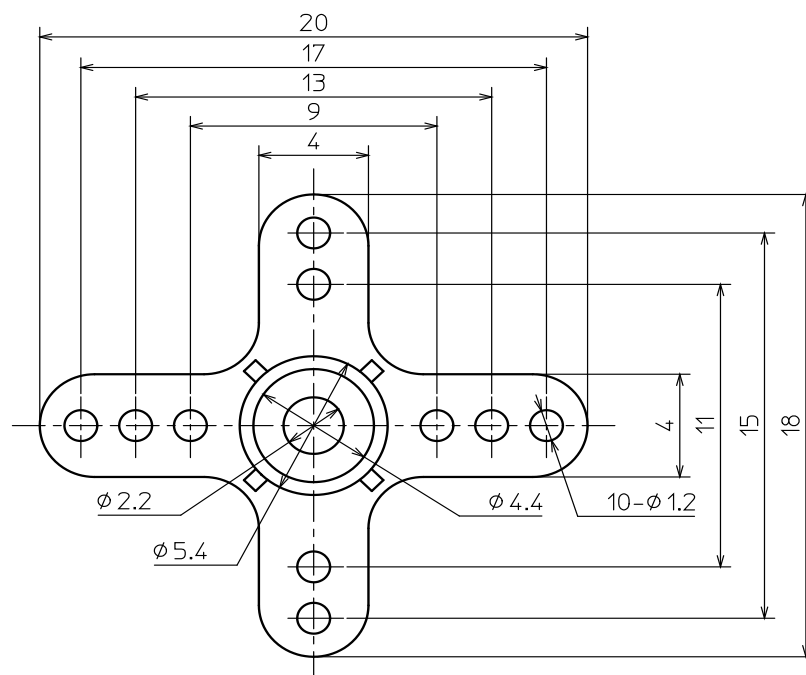
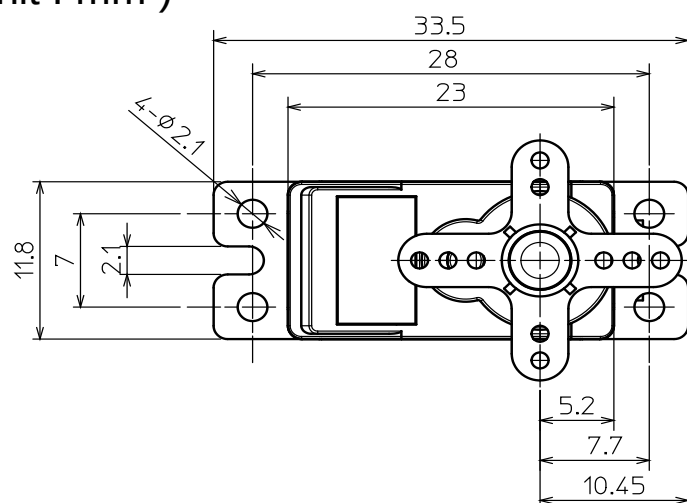
	Item	Specification	Remark
15	Outer Dimension	23.0 x 11.8 x 28.6mm (0.91 x 0.46 x 1.13 inch)	See below Outer Dimension
16	Weight	16.2g (0.57oz)	
17	International Protection Code	—	
18	Case Material	Upper : Resin / Middle : Resin Bottom : Resin / Heat Sink : AL	
19	Gear Set Material	1st : Resin / 2nd,3rd,4th,5th(Final) : Metal	
20	Gear bearing	1 ball bearing 1 metal bearing	
21	Output Shaft	Serration S5	Size: ϕ 5mm, 21 teeth
22	Radial load	—	Do not apply a strong load to the output shaft.
23	Position Sensor	Potentiometer	
24	Motor Type	Brushed DC Motor	
25	MTTF * ¹	Operating time 55h (Inquire for the test report)	<u>Operating Condition</u> • at 7.4V • $\pm 60^\circ$, 0.5Hz sweep <u>Test Condition</u> • Load : Rated Torque (Powder Brake) <u>Angle Command Value</u> 
26	Vibration Resistance * ¹	Operating time 53h (Inquire for the test report)	<u>Operating Condition</u> • at 7.4V • $\pm 60^\circ$, 0.5Hz sweep • No-Load <u>Test Condition (sine wave)</u> • Frequency : 10 to 500Hz • sweep 1oct/min • amplitude limit 2mm • Acceleration : 300m/s² • Vibration axis : X,Y,Z

*¹ At 23 $\pm$ 5°C (Initial Performance Data)*² Each value is typical.

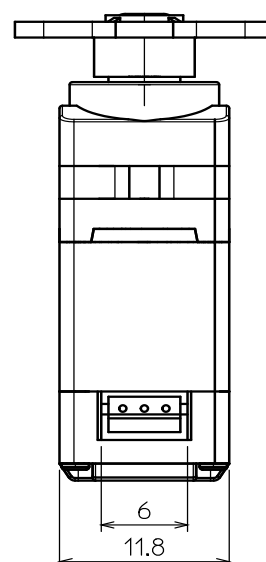
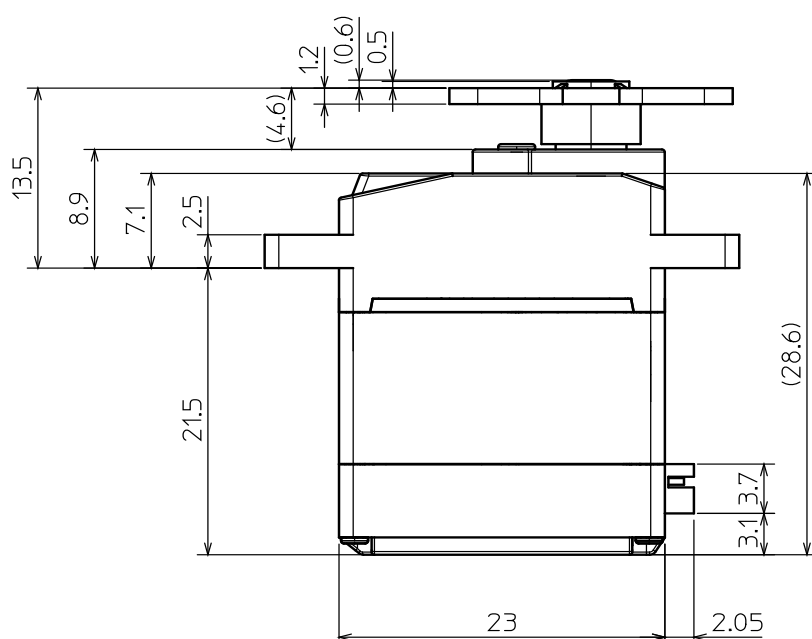
AD12-06H-A02 Technical Specification

Outer Dimension (AD12-06H-A02)

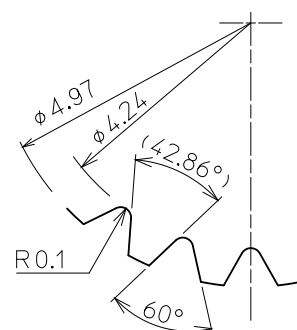
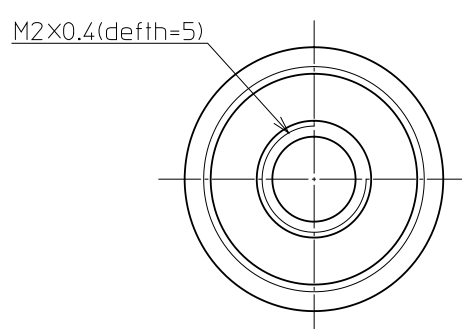
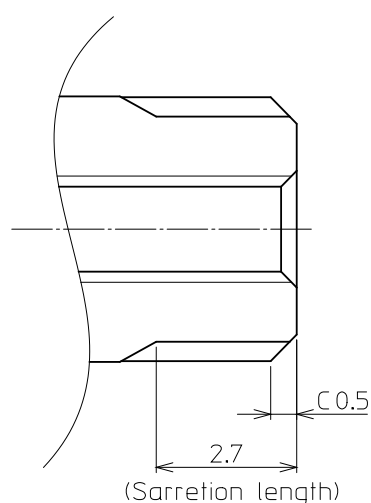
(unit : mm)



Servo Horn



OUTPUT SHAFT



Sarretion Size

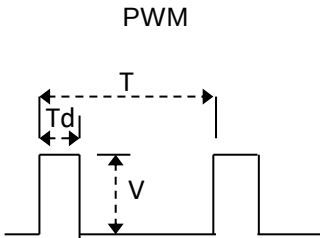
Standard Diameter : Φ5

Angle : 60°

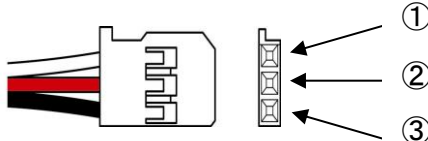
Tooth : 21

AD12-06H-A02 Technical Specification

Specifications for PWM signals (AD12-06H-A02)

	Item	Specification	Remark	
27	Communication Interface		Signal Voltage:V	HIGH : min. 2.0V max. Vcc
				LOW : min. 0.0V max. 0.45V
			Frame Rate:T	3.0~30ms(Default 14.25ms)
			CW / Center / CCW:Td	Default 920 / 1520 / 1520 us

Connector specifications

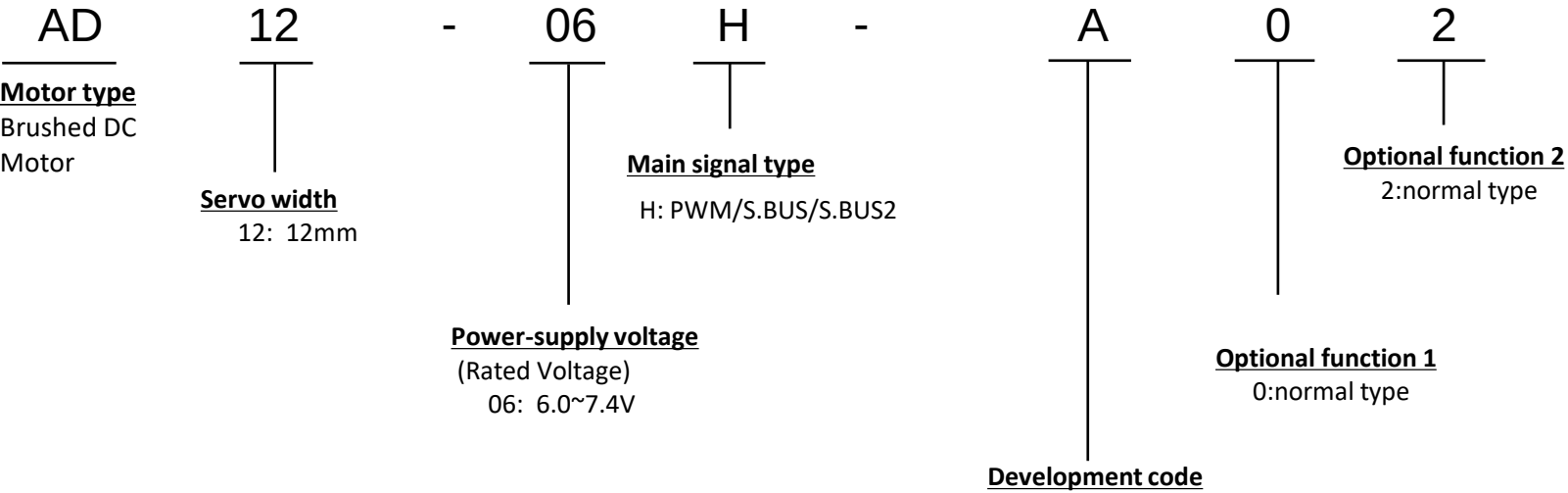
	Item		Specification	Remark	
28	Cable		Non-Shielded Cable	Cable Length : 200mm (7.87 inch)	
29	Connector	Manufacture	J.A.M. Co., Ltd.		
		Type	FC25-03HG		
		Matching	FC25-03M etc.		
30	Pin Assignment		Pin No.	Assignment	Cable Color
			①	PWM	White
			②	Vcc	Red
			③	GND	Black

Connector specifications (Servo side)

	Item		Specification	Remark
31	Connector	Manufacture	J.S.T.MFG.CO.,LTD.	
		Housing	ZHR-3	
		Contact Pin	SZH-002T-P0.5	
		Matching	S3B-ZR	

All Specifications are subject to change without prior notice.

Model name system



- Caution
- This product **SHOULD NOT** be used for the devices that is directly related to human life.
 - Keep the servo away from an object which produces a strong magnetic field.
There is a possibility of malfunction if the servo is affected by a strong magnetic field.